

TO:	
COMMISSIONER OF PATENTS AND TRADEMARKS (USPTO) P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OF DETERMINATION OF AN ACTION OR APPEAL REGARDING A COPYRIGHT

In compliance with the Act of July 19, 1952 (66 Stat. 814; 35 U.S.C. 290) you are hereby advised that a court action has been filed on the following patent(s) in the U.S. District Court:

DOCKET 1:10-cv-00461	DATE FILED 1/22/2010	UNITED STATES DISTRICT COURT, NORTHERN DISTRICT OF ILLINOIS, EASTERN DIVISION
PLAINTIFF Pactiv Corporation		DEFENDANT Multisorb Technologies, Inc. et al
PATENT NO.	DATE OF PATENT	PATENTEE
See Attached	See Attached	See Attached
5,698,250		
5,948,957		
6,183,790		
5,811,142		
6,731,905		

In the above-entitled case, the following patent(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading			
PATENT NO.	DATE OF PATENT		PATENT	

In the above-entitled case, the following decision has been rendered or judgment issued:

DECISION/JUDGMENT		
CLERK Michael W. Dobbins	(BY) DEPUTY CLERK Tiana Davis	DATE 1/25/2010

[54] **MODIFIED ATMOSPHERE PACKAGE FOR CUT OF RAW MEAT**

[75] Inventors: Gary R. DelDuca, Canandaigua; Alan E. Deyo, Rushville; Vinod K. Luthra; Wen P. Wu, both of Pittsford, all of N.Y.

[73] Assignee: **Tenneco Packaging Inc., Evanston, Ill.**

[21] Appl. No.: **627,137**

[22] Filed: **Apr. 3, 1996**

[51] Int. Cl.⁶ **A23B 4/00**

[52] U.S. Cl. **426/124; 53/432; 206/557; 426/129; 426/133; 426/392; 426/396**

[58] Field of Search **53/432-434; 426/124, 426/127, 129, 133, 396, 418, 392; 206/557**

[56] **References Cited**

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1,679,543	8/1928	Rector	426/124
2,825,651	3/1958	Loe et al.	426/124
3,330,670	7/1967	Grindrod et al.	426/129
3,363,395	1/1968	King	53/112
3,419,400	12/1968	Hayhurst et al.	426/124
3,467,244	9/1969	Mahaffy et al.	206/45.34
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"Controlled & modified atmosphere packaging", Fran Labell, Jan. 1985 Food Processing, pp. 153-154.

Brochure: Fujii-Fornost FW-3700 "High Speed Horizontal Form-Fill Seal Machine", 1992.

Brochure: Multiform Disiccants Inc., "FreshPax Oxygen Absorbing Packets", 1994.

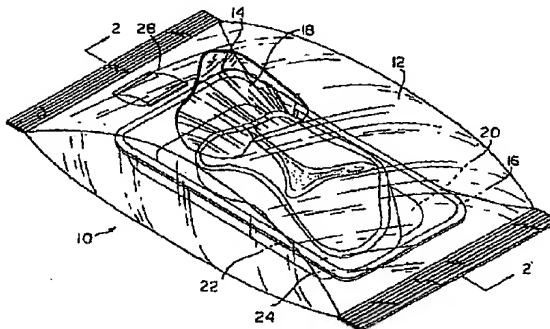
Primary Examiner—Joseph W. Drodge

Attorney, Agent, or Firm—Arnold, White & Durker

[57] **ABSTRACT**

A modified atmosphere packaging system and method creates a modified atmosphere in a package including an inner container and an outer container. The inner container is composed at least partially of a polymeric material substantially permeable to oxygen, while the outer container is composed of a polymeric material substantially impermeable to oxygen. After a food product such as raw meat is placed within the inner container, the inner container is flushed with a desired mixture of gases to substantially remove oxygen from the inner container. The flushed inner container is then sealed and inserted into the outer container without sealing the outer container. Next, the outer container is flushed with the desired mixture of gases to substantially remove oxygen from the outer container. After flushing the outer container, the outer container is sealed. An oxygen scavenger is provided in the package to substantially absorb any residual oxygen within the package.

24 Claims, 2 Drawing Sheets



[54] **MODIFIED ATMOSPHERE PACKAGE**

[75] **Inventors:** Gary R. DelDuca, Canandaigua; Alan E. Deyo, Rushville; Vinod K. Luthra; Wen P. Wu, both of Pittsford, all of N.Y.

[73] **Assignee:** Tenneco Packaging Inc., Evanston, Ill.

[*] **Notice:** This patent is subject to a terminal disclaimer.

[21] **Appl. No.:** 09/094,008

[22] **Filed:** Jun. 9, 1998

Related U.S. Application Data

[63] Continuation of application No. 08/763,719, Dec. 13, 1996, Pat. No. 5,811,142, which is a continuation-in-part of application No. 08/627,137, Apr. 3, 1996, Pat. No. 5,698,250.

[51] **Int. Cl.⁶** A23B 4/00

[52] **U.S. Cl.** 426/124; 53/432; 206/557; 426/129; 426/133; 426/392; 426/396

[58] **Field of Search** 426/124, 129, 426/133, 392, 396, 397, 410, 418; 206/213.1, 557; 53/432-434, 510; 252/188.28

[56] **References Cited**

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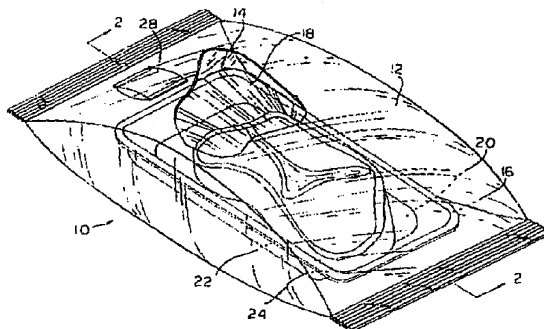
Brochure: Fuji-Formost FW-3700 "High Speed Horizontal Form-Fill Seal Machine", 1992.
 Brochure: Multiform Disiccants Inc., FreshPax Oxygen Absorbing Packets, 1994.
 "Longer Product Shelf Life Using Modified Atmosphere Packaging," Nancy Muller, The National Provisioner, Feb. 1, 1986, pp. 19-23.
 "Controlled and Modified Atmosphere Packaging," Fran Labell, Jan., 1985, Food Processing, pp. 152-154.
 List of Oxygen Absorber References, pp. 1-32, Undated.
 Leward, D.A., "Metmyoglobin Formation in Beef Stored in Carbon Dioxide Enriched and Oxygen Depleted Atmospheres," Journal of Food Science vol. 35 pp. 33-37 (1970).
 Gill, C. O., et al., "The Use of Oxygen Scavengers to Prevent Transient Discolouration of Ground Beef Packaged Under Controlled, Oxygen-depleted Atmospheres," Meat Science, vol. 41, No. 1, pp. 19-27, (1995).
 Gill, C. O., "Extending the Storage Life of Raw Chilled Meats," Elsevier Science Ltd., S99-S109 (1990).

Primary Examiner—Joseph W. Drodge
Attorney, Agent, or Firm—Arnold White & Durkee

[57] **ABSTRACT**

A modified atmosphere packaging method creates a modified atmosphere in a package including an inner package and an outer package. The inner package is composed at least partially of a polymeric material substantially permeable to oxygen, while the outer package is composed of a polymeric material substantially impermeable to oxygen. After a food product such as raw meat is placed within the inner package, the inner package is flushed with a desired mixture of gases to substantially remove oxygen from the inner package. The flushed inner package is then sealed and inserted into the outer package without sealing the outer package. Next, the outer package is flushed with the desired mixture of gases to substantially remove oxygen from the outer package. After flushing the outer package, the outer package is sealed. An oxygen scavenger is provided in the package to substantially absorb any residual oxygen within the package. The oxygen scavenger is activated with an oxygen uptake accelerator to increase the rate at which the residual oxygen is absorbed.

17 Claims, 3 Drawing Sheets



(12) **United States Patent**
DelDuca et al.

(10) **Patent No.:** **US 6,183,790 B1**
 (45) **Date of Patent:** ***Feb. 6, 2001**

(54) **MODIFIED ATMOSPHERE PACKAGE**

FOREIGN PATENT DOCUMENTS

(75) **Inventors:** Gary R. DelDuca, Canandaigua; Alan E. Deyo, Rushville; Vinod K. Luthra; Wen P. Wu, both of Pittsford, all of NY (US)

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 0 468 880 A1 1/1992 (EP).
 0 547 761 A1 6/1993 (EP).
 1 556 853 11/1979 (GB).
 6 278 774 10/1994 (JP).
 6 343 815 12/1994 (JP).

(73) **Assignee:** **Pactly Corporation, Lake Forest, IL (US)**

OTHER PUBLICATIONS

(*) **Notice:** Under 35 U.S.C. 154(b), the term of this patent shall be extended for 0 days.

This patent is subject to a terminal disclaimer.

Abstract: D 320 215 0 (Japan), Undated.

Application: 924298; Jun. 12, 1992; De Muelenaere et al. Gill, "Extending the Storage Life of Raw Chilled Meats," Agriculture and Agri-Food Canada Research Centre, Undated.

Gill et al., "The Use of Oxygen Scavengers to Prevent the Transient Discolouration of Ground Beef Packaged Under Controlled, Oxygen-depleted Atmospheres," *Meat Science* 41(1):19-27 (1995).

(21) **Appl. No.:** **09/384,517**

(22) **Filed:** **Aug. 27, 1999**

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Related U.S. Application Data

(63) Continuation of application No. 09/094,008, filed on Jun. 9, 1998, now Pat. No. 5,948,457, which is a continuation of application No. 08/763,719, filed on Dec. 13, 1996, now Pat. No. 5,811,142, which is a continuation-in-part of application No. 08/627,137, filed on Apr. 3, 1996, now Pat. No. 5,698,250.

Primary Examiner—Joseph W. Drodge

(74) **Attorney, Agent, or Firm**—Jenkins & Gilchrist

(57)

ABSTRACT

(51) **Int. Cl.** **A23B 4/00**

(52) **U.S. Cl.** **426/124; 426/129; 426/133; 53/432; 206/557**

(58) **Field of Search** **426/124, 129, 426/133, 392, 396, 397, 410, 418; 206/213.1, 557; 252/188.28; 53/432, 433, 434**

(56) **References Cited**

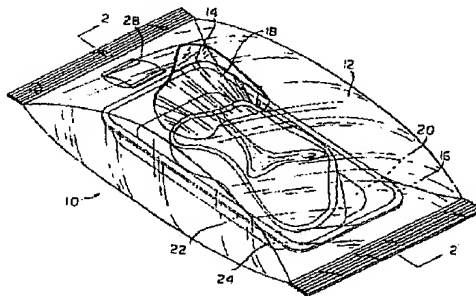
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 3,083,861 4/1963 Amberg et al..

A modified atmosphere packaging method creates a modified atmosphere in a package including an inner package and an outer package. The inner package is composed at least partially of a polymeric material substantially permeable to oxygen, while the outer package is composed of a polymeric material substantially impermeable to oxygen. After a food product such as raw meat is placed within the inner package, the inner package is flushed with a desired mixture of gases to substantially remove oxygen from the inner package. The flushed inner package is then sealed and inserted into the outer package without sealing the outer package. Next, the outer package is flushed with the desired mixture of gases to substantially remove oxygen from the outer package. After flushing the outer package, the outer package is sealed. An oxygen scavenger is provided in the package to substantially absorb any residual oxygen within the package. The oxygen scavenger is activated with an oxygen uptake accelerator to increase the rate at which the residual oxygen is absorbed.

(List continued on next page.)

10 Claims, 3 Drawing Sheets



United States Patent**DelDuca et al.**[11] **Patent Number:** 5,811,142[45] **Date of Patent:** *Sep. 22, 1998[54] **MODIFIED ATMOSPHERE PACKAGE FOR CUT OF RAW MEAT**[75] **Inventors:** Gary R. DelDuca, Canandaigua; Alan E. Deyo, Rushville; Vinod K. Luthra; Wen P. Wu, both of Pittsford, all of N.Y.[73] **Assignee:** Tenneo Packaging, Evanston, Ill.[*] **Notice:** The term of this patent shall not extend beyond the expiration date of Pat. No. 5,698,250.[21] **Appl. No.:** 763,719[22] **Filed:** Dec. 13, 1996**Related U.S. Application Data**[63] **Continuation-in-part of Ser. No. 527,137, Apr. 3, 1996, Pat. No. 5,698,250.**[51] **Int. Cl.⁶** A23B 4/00[52] **U.S. Cl.** 426/424; 53/432; 206/557; 426/129; 426/133; 426/392; 426/396[58] **Field of Search** 426/124, 129, 426/133, 392, 396, 397, 410, 418; 206/213.1, 557; 53/432-434, 510; 252/188.28[56] **References Cited****U.S. PATENT DOCUMENTS**

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1,679,543	8/1928	Reitor	99/181
2,825,651	3/1958	Loe et al.	99/171
3,363,395	1/1968	King	53/112
3,419,400	12/1968	Hayhurst et al.	99/171

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06343815	12/1994	Japan .
92/4298	6/1992	South Africa .

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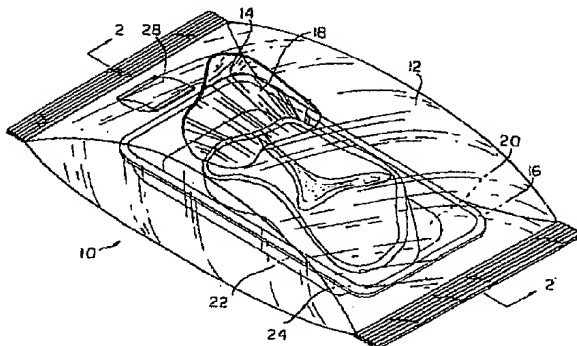
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 Leward, D.A., "Meatmyoglobin Formation in Beef Stored in Carbon Dioxide Enriched and Oxygen Depleted Atmospheres," *Journal of Food Science* vol. 35 pp. 33-37 (1970).
 Gill, C. O., et al., "The Use of Oxygen Scavengers to Prevent Transient Discolouration of Ground Beef Packaged Under Controlled, Oxygen-depleted Atmospheres," *Meat Science*, vol. 41, No. 1, pp. 19-27, (1995).
 Gill, C. O., "Extending the Storage Life of Raw Chilled Meats," Elsevier Science Ltd., S99-S109 (1990).
 "Longer Product Shelf Life Using Modified Atmosphere Packaging," Nancy Muller, *The National Provisioner*, Feb. 1, 1986, pp. 19-23.
 "Controlled and Modified Atmosphere Packaging," Fran Labell, Jan. 1985, *Food Processing*, pp. 152-154.
 Brochure: Fuji-Formost FW-3700 "High Speed Horizontal Form-Fill Seal Machine", 1992.
 Brochure: Multiform Disiccants Inc., FreshPax Oxygen Absorbing Packets, 1994.

Primary Examiner—Joseph W. Drodge
Attorney, Agent, or Firm—Arnold, White & Durkee

[57]

ABSTRACT

A modified atmosphere packaging method creates a modified atmosphere in a package including an inner package and an outer package. The inner package is composed at least partially of a polymeric material substantially permeable to oxygen, while the outer package is composed of a polymeric material substantially impermeable to oxygen. After a food product such as raw meat is placed within the inner package, the inner package is flushed with a desired mixture of gases to substantially remove oxygen from the inner package. The flushed inner package is then sealed and inserted into the outer package without sealing the outer package. Next, the outer package is flushed with the desired mixture of gases to substantially remove oxygen from the outer package. After flushing the outer package, the outer package is sealed. An oxygen scavenger is provided in the package to substantially absorb any residual oxygen within the package. The oxygen scavenger is activated with an oxygen uptake accelerator to increase the rate at which the residual oxygen is absorbed.

15 Claims, 3 Drawing Sheets

(12) **United States Patent**
DeDuca et al.

(10) Patent No.: **US 6,231,905 B1**
 (45) Date of Patent: ***May 15, 2001**

(54) **SYSTEM AND METHOD OF MAKING A
 MODIFIED ATMOSPHERE PACKAGE
 COMPRISING AN ACTIVATED OXYGEN
 SCAVENGER FOR PACKAGING MEAT**

0 457 457 A2 11/1991 (EP) .
 0 468 880 A1 1/1992 (EP) .
 0 547 761 A1 6/1993 (EP) .
 698563 2/1996 (EP) .

(List continued on next page.)

(76) Inventors: Gary R. DeDuca, 82 Howell St.,
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 Deyo, 66 S. Main St., Rushville, NY
 (US) 14544; Vinod K. Luthra, 21
 Barrington Hills; Wen P. Wu, 4 Silver
 Pines Dr., both of Pittsford, NY (US)
 14534

(*) Notice: This patent issued on a continued pro-
 secution application filed under 37 CFR
 1.53(d), and is subject to the twenty year
 patent term provisions of 35 U.S.C.
 154(a)(2).

Subject to any disclaimer, the term of this
 patent is extended or adjusted under 35
 U.S.C. 154(b) by 0 days.

(21) Appl. No.: 09/168,659

(22) Filed: Oct. 8, 1998

(51) Int. Cl.⁷ B65B 55/00

(52) U.S. Cl. 426/118; 426/129; 426/316;
 426/319; 426/324; 426/332; 426/396; 426/404;
 426/410; 426/415

(58) Field of Search 426/118, 129,
 426/324, 332, 316, 319, 404, 396, 415,
 410; 53/427, 432, 434

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Application: 924298; Jun. 12, 1992; De Muelenaere et al.
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 Agriculture and Agri-Food Canada Research Centre;
 (1990).

(List continued on next page.)

Primary Examiner—Nina Bhat

(74) Attorney, Agent, or Firm—Jenkins & Gilchrist, P.C.

(57)

ABSTRACT

A packaging system and method utilizes a modified atmo-
 sphere package including a first package and a second
 package. The first package includes a non-barrier portion
 substantially permeable to oxygen, while the second pack-
 age is substantially impermeable to oxygen. After a food
 product such as raw meat is placed within the first package,
 the first package is sealed and then inserted into the second
 package without sealing the second package so as to create
 a pocket between the first and second packages. The system
 and method first employ an oxygen reduction technique such
 as evacuation, gas flushing, and/or scavenging to quickly
 reduce the oxygen level in the pocket to a first non-zero
 level, and then employ an activated oxygen scavenger to
 further reduce the oxygen level to zero percent after the
 package is sealed. The oxygen scavenger is activated with an
 oxygen uptake accelerator to increase the rate at which the
 oxygen is absorbed. The oxygen scavenger is positioned
 external to the first package to aggressively absorb any
 residual oxygen within the pocket and the first package and
 absorb any oxygen that might seep into the modified atmo-
 sphere package.

22 Claims, 6 Drawing Sheets

